



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,087	09/28/2004	Nozomu Sugo	258970US0XPCT	9940
22850	7590	07/07/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER MCCRACKEN, DANIEL				
ART UNIT 1793		PAPER NUMBER		
NOTIFICATION DATE 07/07/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

### Office Action Summary

**Application No.**

10/509,087

**Applicant(s)**

SUGO ET AL.

**Examiner**

DANIEL C. MCCracken

**Art Unit**

1793

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-6, 8, 9, 12-21 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 3, 7, 10, 11 and 22-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### **DETAILED ACTION**

Citation to the Specification will be in the following format: (S. # : ¶/L) where # denotes the page number and ¶/L denotes the paragraph number or line number. Citation to patent literature will be in the form (Inventor # : LL) where # is the column number and LL is the line number. Citation to the pre-grant publication literature will be in the following format (Inventor # : ¶) where # denotes the page number and ¶ denotes the paragraph number.

#### ***Allowable Subject Matter, Status of Application***

The indicated allowability of claims 1-27 is withdrawn in view of the newly discovered reference(s) to co-pending 10/962,434 and JP 11-293527. Rejections based on the newly cited reference(s) follow. Co-pending 10/962,434 and the instant application (10/509,087) share two common inventors, namely, Nozomu Sugo and Hideharu Iwasaki. Upon reconsideration, while not worded precisely the same, the claims appear to have double patenting issues that are addressed below. Likewise, prior art submitted in the 10/962,434 application is applicable to the instant application. Applicants' amendment dated 6/11/2009 has been received and will be entered. Claims 29-52 are acknowledged as cancelled.

#### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

Art Unit: 1793

*Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2, 4-5, 8-9, 13, 15-19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 6, 12, 18, and 24 of copending Application No. 10/962,434 in view of US 5,446,005 to Endo and JP 11-293527 to Takashi, et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because, while not worded exactly, they appear to be describing the same low-temperature pre-heating scheme to dehydrate the activating agent.

**With respect to Claim 1** of the instant application, Claims 6, 12, 18, and 24 (i.e. all of the independent claims) of the '434 application recite "moistening at least the surface." However, according to the specification of the '434 application (which can be used to show the meaning of terms), this actually – according to the Applicants - refers to the way something looks versus whether something is "moistened" or "wet," etc. See (S. '434, 15: 1-6). Claims 6, 12, 18, and 24 of the '434 application further recite the heat treating as claimed in dependent claims 5-6 of the instant application. Ergo, both sets of claims appear to be reciting the dehydrating of the chemical activation agent (KOH, etc.) at temperatures where the activation

agent remains solid. As to the reduced pressure recited in Claim 6, the pressures recited are known in the art as useful as controlling the isotropy of the pitch. *See* (Endo 5: 40-50) (noting that the pressures give rise to optically isotropic pitch). One would be motivated to employ said pressures to achieve the regulation of pores taught by Endo. *See* (Endo 2: 36 *et seq.*). **As to Claim 2** of the instant application, Claims 6, 12, 18, and 24 of '434 suggest temperatures of 80 C or more. **As to Claim 4** of the instant application, Claims 6, 12, 18, and 24 of '434 recite granular isotropic pitch. To the extent these claims do not recite the precise granulated product as claimed, the sizes appear routine. *See* (Takashi [0013]). One would be motivated to employ a smaller size to increase dispersion of the activating agent. **As to Claim 5** of the instant application, Claims 6, 12, 18, and 24 of '434 suggest the dehydration temperatures. To the extent the Claims of '434 do not, note that Takashi recites temperatures squarely between the two (*i.e.* "200 C or more" from '087 and "eliminating moisture . . . at a temperature of 400 C or lower" from '434). *See* (Takashi [0016]) ("150-300"). Note that Takashi describes this as a "non-deliqesce [*sic*]" process. The word "deliquestce" is understood to mean "to melt," and as such a "non-deliquestce" process is understood to mean a process that does not melt the activating agent, *i.e.* it is maintained in "the solid state." **As to Claims 8-9** of the instant application, Claims 6, 12, 18, and 24 of the '434 application recite granular isotropic pitch, *i.e.* "easily graphitizable carbonaceous material." **As to Claim 13** of the instant application, Claims 8, 14, 20, and 26 of '434 claim the same alkali activating agents. **As to Claim 15-19** of the instant application, Claims 9, 15, 21 and 27 of '434 claim the temperatures. The holding times appear routine. (Takashi [0033]). As to the temperature rates, this appears to recite the naturally occurring process of heating the oven/kiln.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-5, 8-9, and 13-19 are rejected under 35 U.S.C. 102 (a) as being anticipated by US 2002/0048144 to Sugo, et al. The publication date of Sugo (4/25/2002) and the PCT filing date of this application (4/22/2003) serves as the basis for the rejection under 102(a).

With respect to **Claim 1**, Sugo teaches mixing an activating agent with a carbonaceous material and eliminating the moisture (*i.e.* “dehydrating”), followed by activation. *See generally* (Sugo 4: [0044]). As to **Claim 4**, the powder size appears to be taught. (Sugo 3: [0033]). As to **Claim 5**, the dehydrating temperature is taught. *Id.* As to **Claims 8-9**, pitch fibers are taught. (Sugo 2: [0016]). As to **Claim 13**, the activating agents are taught. (Sugo 4: [0039]). As to **Claim 14**, the ratios are taught. (Sugo 4: [0042]). As to **Claim 15**, the temperatures are taught. (Sugo 4: [0042]). As to **Claims 16, 18 and 19**, Sugo teaches 200 C/hr, which converts to 3.33 C/min. (Sugo 6: [0061] *et seq.*). The hold time/temperature is taught. *Id.* As to **Claim 17**, Sugo appears to teach 2 C/min. (Sugo 7: [0068]). Note that there would appear to be a typographical

error in paragraph 68 in that it recites “2 t/minute,” but given the overall context (referring to a temperature increasing rate), it can be reasonably inferred that 2 C/min was intended.

Claims 1, 4-5, 8-9, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-293527 to Takashi (Petoca LTD). A computer translation of Takashi to which reference shall be made accompanies the office action.

With respect to **Claim 1**, Takashi teaches mixing alkali activating agents with carbonaceous material. (Takashi [0026]) (activating agents), (Takashi [0016]) (mixing with activating agent). Grinding is taught. (Takashi [0013]). As noted above, the “non-deliqescence” language in Takashi is being interpreted as maintaining a solid state. (Takashi [0016]). The temperatures recited are those claimed in dependent claims as suitable for dehydrating. Takashi recites activation to make activated carbon. *See e.g.* (Takashi [0021]). As to **Claim 4**, Takashi teaches diameters less than 50 mm. (Takashi [0013]). As to **Claim 5**, Takashi teaches temperatures of 200 C or more. (Takashi [0016]). As to **Claims 8-9**, Takashi recites pitch fibers. (Takashi [0013]). As to **Claim 13**, potassium hydrate (a synonym for potassium hydroxide) is taught. (Takashi [0020]). As to **Claim 14**, the ratio is taught. (Takashi [0020]). As to **Claim 15**, the temperature is taught. (Takashi [0021]).

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0048144 to Sugo.

The preceding discussion of Sugo accompanying the anticipation rejection *supra* is expressly incorporated herein by reference. With respect to **Claim 12**, Sugo discloses pulverized potassium hydroxide. (Sugo 5: [0053]). To the extent Sugo doesn't disclose the size, changes in size do not impart patentability. *See* MPEP 2144.04 IV. A. ("Changes in Size/Proportion").

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0048144 to Sugo, as applied to claims 1 and 16 above, and further in view of US 4,159,306 to Borst.

The preceding discussion of Sugo accompanying the anticipation rejection *supra* is expressly incorporated herein by reference. With respect to **Claims 20 and 21**, to the extent Sugo discloses a batch-type operation versus a continuous rotary kiln, this does not impart patentability. Rotary kilns for making activated carbon are old and known. Borst teaches a rotary kiln for making activated carbon. *See e.g.* (Borst 3: 16 *et seq.*) (describing continuous operation of the rotary kiln). Making the claimed process continuous with known process equipment would be obvious to one of skill in the art. *See* MPEP 2144.04 V. E. ("Making Continuous").



Claims 12, 16-19 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-293527 to Takashi (Petoca LTD).

The preceding discussion of Takashi accompanying the anticipation rejection *supra* is expressly incorporated herein by reference. With respect to **Claim 12**, to the extent Takashi may not disclose the size of the activating agent, note that Takashi discloses mixing with the carbonaceous substance. (Takashi [0018]). Takashi suggests that increased homogeneity/dispersion is desired. *Id.* Employing a smaller size to increase dispersion would be obvious to the skilled artisan. *See also* MPEP 2144.04 IV. A. ("Changes in Size/Proportion"). With respect to **Claims 16-19**, Takashi teaches the temperatures and holding times. (Takashi [0021]) (temperature) *and* (Takashi [0033]) (time). To the extent Takashi may not recite the heating rate, this appears to be the phenomena present when heating up the oven and is readily optimized. As to **Claims 25-27**, Takashi teaches adding different amounts of activating agent to the pitch. (Takashi [0020]). Takashi suggests the effect of the activating agent on surface area (Takashi [0021]). Optimization of the amounts does not impart patentability. *See generally* MPEP 2144.05.

Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-293527 to Takashi (Petoca LTD) as applied to claims 16 above, and further in view of US 4,159,306 to Borst.

The preceding discussion of Takashi accompanying the obviousness rejection *supra* is expressly incorporated herein by reference. With respect to **Claims 20 and 21**, To the extent

Takashi discloses a batch-type operation versus a continuous rotary kiln, this does not impart patentability. Rotary kilns for making activated carbon are old and known. Borst teaches a rotary kiln for making activated carbon. *See e.g.* (Borst 3: 16 *et seq.*) (describing continuous operation of the rotary kiln). Making the claimed process continuous with known process equipment would be obvious to one of skill in the art. *See* MPEP 2144.04 V. E. (“Making Continuous”).

#### ***Allowable Subject Matter***

Claims 3, 7, 10-11, 22, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 28 is allowed.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL C. MCCracken whose telephone number is (571)272-6537. The examiner can normally be reached on Monday through Friday, 9 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel C. McCracken/  
Daniel C. McCracken  
Examiner, Art Unit 1793  
DCM

/Stanley S. Silverman/  
SPE, Art Unit 1793